

Title: STATE-SPECEFIC VARIANTS OF TRANSLATED CODE UNDER EMULATION

1/3

FIG. 1

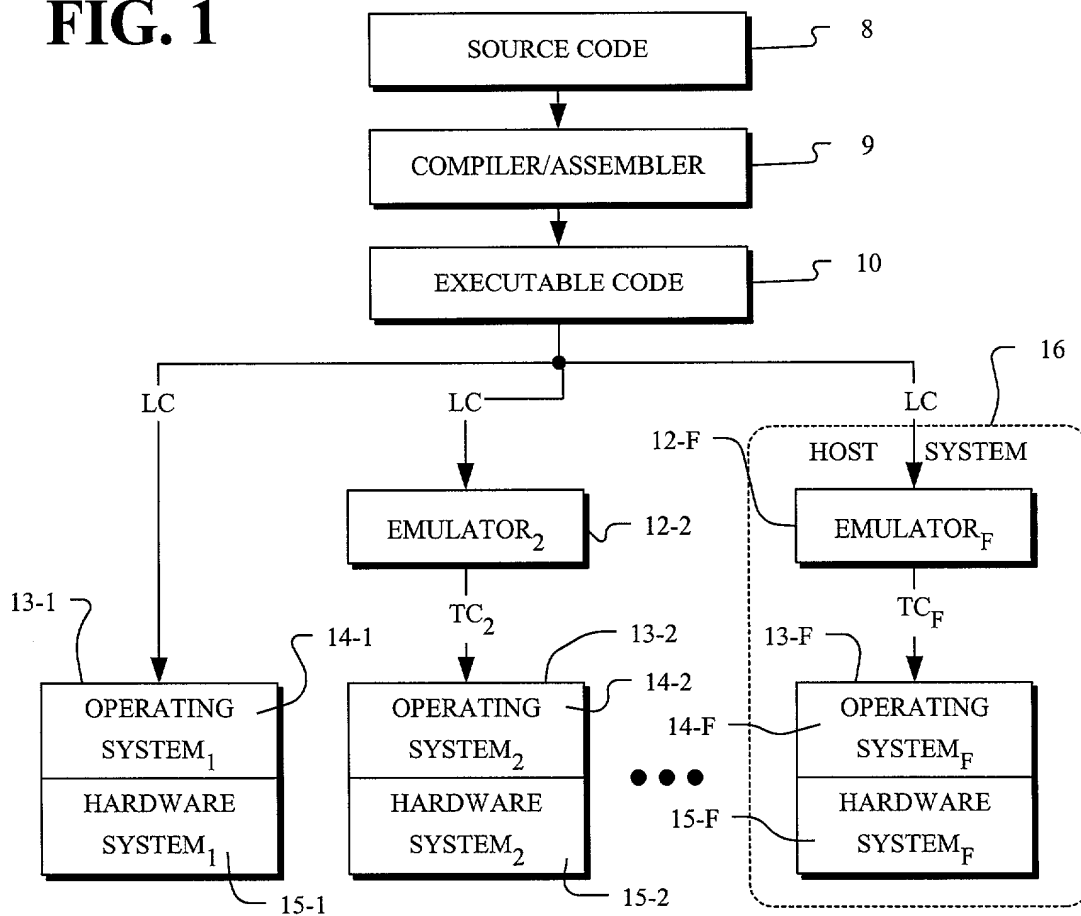
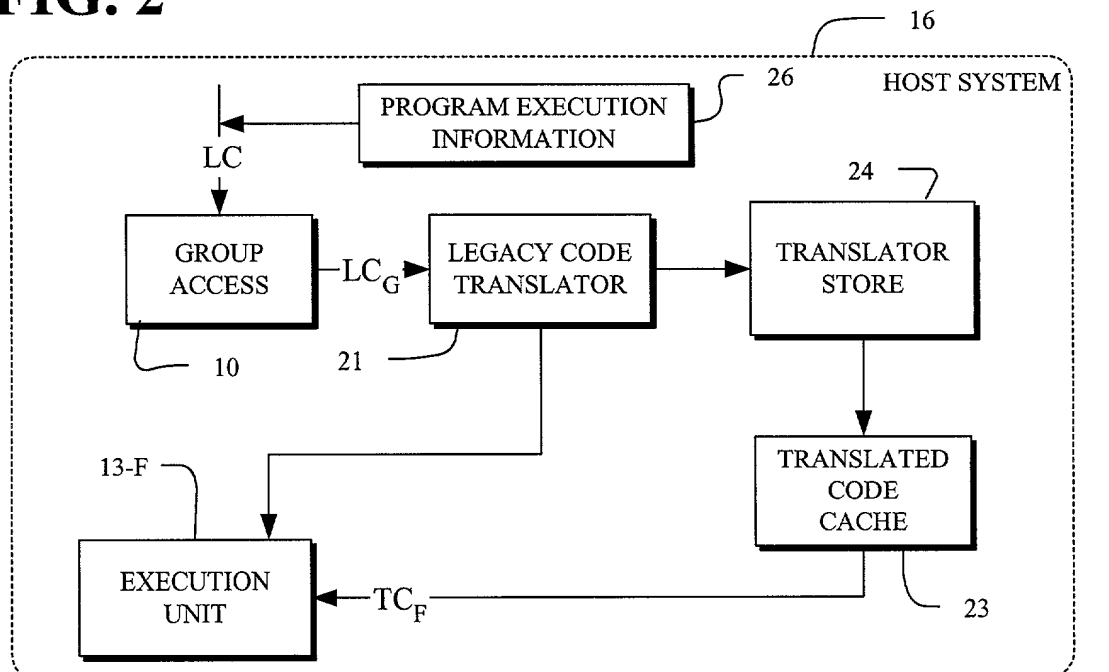


FIG. 2



LEGACY CODE (CISC)

100	START	BALR	B1,R0
102	BASE	LM	R1,R2,DATA1
106		MVC	DATA1, DATA3
10C		A	R1,DATA2
110		SRA	R1,1
114		SH	R2,DATA2
118		AR	R1,R2
11A		BC	TARGET
120	DATA1	DC	X'005390BC'
		DC	X'09C20004'
128	DATA2	DC	X'0009'
12A	DATA3	DC	X'800039AF'

FIG. 3



100	START	BALR	B1, R0
102	BASE	LM	R1, R2, DATA1
106		MVC	DATA1, DATA3
10C		A	R1, DATA2

3<sub>C</sub>-10



TRANSLATED CODE (RISC)

BALR	MOV	B1	BASE
LM	AD	A1	B1, DATA1 - BASE
	D	LD4	R1 [A1]
	AD	A1	A1, 4
	D	LD4	R2 [A1]
MVC	AD	A1	B1, DATA1 - BASE
	AD	A2	B1, DATA3 - BASE
	D	LD4	T1 [A2]
	ST4	T1	[A1]
A	AD	A1	B1, DATA2 - BASE
H	D	LD2	T1 [A1]
	AD	R1	R1, T1
	B		XFER_SEQUENTIAL

3<sub>R</sub>-10

3<sub>C</sub>-11

110		SRA	R1,1
114		SH	R2,DATA2
118		AR	R1,R2
11A		BC	TARGET



120	DATA1	DC	X'005390BC'
		DC	X'09C20004'
128	DATA2	DC	X'0009'
12A	DATA3	DC	X'800039AF'

3<sub>C</sub>-12

3<sub>R</sub>-11

SRA	SHR	R1	1
SH	AD	A1	B1, DATA2 - BASE
	D	LD2	T1 [A1]
	SUB	R2	R2, T1
AR	AD	R1	R1, R2
BC	AD	A1	B1, TARGET - BASE
	D		XFER_BRANCH

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3/3

FIG. 4

